WHAT IS CLAIMED IS:

1. A method of fabricating a liquid crystal display device, comprising the steps of:

(a) fabricating a switching device on a substrate;

(b) forming an interlayer insulating film on said substrate such that said switching device is covered with said interlayer insulating film; and

(c) forming a transparent electrode on said interlayer insulating film, said transparent electrode being electrically connected to said switching device through said interlayer insulating film,

said step (c) including:

(c1) depositing electrically conductive, transparent and amorphous material on said interlayer insulating film;

(c2) patterning said material into said transparent electrode; and

(c3) turning said transparent electrode into polysilicon by thermal annealing carried out after formation of an alignment film.

2. The method as set forth in claim 1, wherein said step (b) includes the steps of:

(b1) forming an electrically insulating inorganic film on said substrate such that said switching device is covered with said electrically insulating inorganic film; and

(b2) forming an electrically insulating organic film on said electrically insulating inorganic film.

3. The method as set forth in claim 2, wherein said electrically insulating organic film is formed covering therewith at least partially at least a signal line including a drain electrode of said switching device, in said step (b2).

4. The method as set forth in claim 1, wherein said step (a) includes the steps of:

(a1) forming both a scanning line including a gate electrode of said switching device and a common line through which a common voltage is applied, on said substrate;

(a2) forming a gate insulating film on said substrate such that said scanning line and said common line are covered with said gate insulating film;

(a3) forming a semiconductor layer on said gate insulating film, said semiconductor layer acting as an active layer of said switching device; and

(a4) forming both a signal line including a drain electrode of said switching device and a source electrode of said switching device, said signal line intersecting with said scanning line,

and said step (c) includes the step of patterning said electrically conductive, transparent and amorphous material into a pixel electrode and a common electrode on said interlayer insulating film, said pixel electrode being in electrical connection with said switching device, said common electrode being in electrical connection with said common line.

5. The method as set forth in claim 1, wherein said material is indium-tin oxide (ITO).

6. The method as set forth in claim 1, wherein said material is deposited on said interlayer insulating film in said step (c1) at room temperature (RM).

7. The method as set forth in claim 1, wherein said material is deposited on said interlayer insulating film in said step (c1) in atmosphere including at least moisture or hydrogen.

8. The method as set forth in claim 1, wherein said thermal annealing is

carried out in said step (c3) in the range of 180 to 240 degrees centigrade both inclusive.

9. A method of fabricating a liquid crystal display device, comprising the steps of:

(a) fabricating a switching device on a substrate;

(b) forming an interlayer insulating film on said substrate such that said switching device is covered with said interlayer insulating film, said interlayer insulating film being comprised of an electrically insulating inorganic film and an electrically insulating organic film formed on said electrically insulating inorganic film; and

(c) forming a transparent electrode on said interlayer insulating film, said transparent electrode being electrically connected to said switching device through said interlayer insulating film,

said step (c) including:

(c1) patterning said electrically insulating organic film;

(c2) applying plasma to said substrate including said electrically insulating organic film;

(c3) forming a contact hole throughout said electrically insulating inorganic film;

(c4) depositing electrically conductive transparent material on said interlayer insulating film; and

(c5) patterning said material into said transparent electrode.

10. The method as set forth in claim 9, wherein said electrically insulating organic film is formed covering therewith at least partially at least a signal line including a drain electrode of said switching device, in said step (c1).

11. The method as set forth in claim 9, wherein said step (a) includes the

steps of:

(a1) forming both a scanning line including a gate electrode of said switching device and a common line through which a common voltage is applied, on said substrate;

(a2) forming a gate insulating film on said substrate such that said scanning line and said common line are covered with said gate insulating film;

(a3) forming a semiconductor layer on said gate insulating film, said semiconductor layer acting as an active layer of said switching device; and

(a4) forming both a signal line including a drain electrode of said switching device and a source electrode of said switching device, said signal line intersecting with said scanning line,

and said step (c5) including the step of patterning said electrically conductive transparent material into a pixel electrode and a common electrode on said interlayer insulating film, said pixel electrode being in electrical connection with said switching device, said common electrode being in electrical connection with said common line.

12. The method as set forth in claim 9, wherein said plasma is helium (He) plasma.

13. The method as set forth in claim 9, wherein said step (c3) includes:

(c3-1) forming a photoresist on said interlayer insulating film in a predetermined pattern;

(c3-2) post-baking said photoresist; and

(c3-3) etching said electrically insulating inorganic film with said photoresist being used as a mask by wet-etching or both wet- and dry-etching.

14. The method as set forth in claim 9, wherein said electrically conductive transparent material is indium-tin oxide (ITO) or indium-zinc oxide (IZO).

15. A method of fabricating a liquid crystal display device, comprising the steps of:

(a) fabricating a switching device on a substrate;

(b) forming an interlayer insulating film on said substrate such that said switching device is covered with said interlayer insulating film, said interlayer insulating film being comprised of an electrically insulating inorganic film and an electrically insulating organic film formed on said electrically insulating inorganic film; and

(c) forming a transparent electrode on said interlayer insulating film, said transparent electrode being electrically connected to said switching device through said interlayer insulating film,

said step (c) including:

(c1) patterning said electrically insulating organic film;

(c2) forming a contact hole throughout said electrically insulating inorganic film;

(c3) depositing electrically conductive transparent material on said interlayer insulating film; and

(c4) patterning said material into said transparent electrode,

said step (c2) including:

(c2-1) forming a photoresist on said interlayer insulating film in a predetermined pattern; and

(c2-2) applying dry-etching to said electrically insulating inorganic film with said photoresist being used as a mask without post-baking said photoresist.

16. The method as set forth in claim 15, wherein said electrically insulating organic film is formed covering therewith at least partially at least a signal line including a drain electrode of said switching device, in said step (c1).

17. The method as set forth in claim 15, wherein said step (a) includes the steps of:

(a1) forming both a scanning line including a gate electrode of said switching device and a common line through which a common voltage is applied, on said substrate;

(a2) forming a gate insulating film on said substrate such that said scanning line and said common line are covered with said gate insulating film;

(a3) forming a semiconductor layer on said gate insulating film, said semiconductor layer acting as an active layer of said switching device; and

(a4) forming both a signal line including a drain electrode of said switching device and a source electrode of said switching device, said signal line intersecting with said scanning line,

and said step (c5) including the step of patterning said electrically conductive transparent material into a pixel electrode and a common electrode on said interlayer insulating film, said pixel electrode being in electrical connection with said switching device, said common electrode being in electrical connection with said common line.

18. The method as set forth in claim 15, wherein said electrically conductive transparent material is indium-tin oxide (ITO) or indium-zinc oxide (IZO).